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| (21) International Application Number: PCT/US97/09738 (22) International Filing Date: 4 June 1997 (04.06.97) (30) Priority Data: 60/019,368 5 June 1996 (05.06.96) US 08/850,740 2 May 1997 (02.05.97) US (71) Applicant: SARNOFF CORPORATION [US/US]; 201 Washington Road, Princeton, NJ 08543-6449 (US). (72) Inventor: KANE, James; 32 Royal Oak Road, Lawrenceville, NJ 08648 (US). (74) Agents: GAYBRICK, Robert, J. et al.; Morgan, Lewis & Bockius LLP, 1800 M Street, N.W., Washington, DC 20036 (US). | | (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> |

(54) Title: METHOD FOR PREPARING SMALL PARTICLE SIZE FLUORIDE UP-CONVERTING PHOSPHORS

(57) Abstract

Spherical particles of fluoride up-converter phosphors having a particle size of 1 micron and less can be made from their corresponding precursor hydroxycarbonate particles by heating the hydroxycarbonate particles in an oxygen-containing atmosphere to convert the hydroxycarbonate to the corresponding oxide but without changing the size and shape of the particles, and then heating the phosphor oxide particles to their corresponding fluoride particles by heating in SF₆, at a temperature that will crack the SF₆ but will not change the size or shape of the phosphor particles.

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Title: WO9746488A1: METHOD FOR PREPARING SMALL PARTICLE SIZE FLUORIDE UP-CONVERTING PHOSPHORS[French]

Derwent Title: Spherical phosphor fluoride particles of uniform size - are capable of emitting visible, when excited by long wavelength light, useful in, e.g. diagnostic antibody-antigen assays

Country: WO World Intellectual Property Organization (WIPO)

Kind: A1 Publ. of the Int. Appl. with Int. search report

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Published / Filed: 1997-12-11 / 1997-06-04

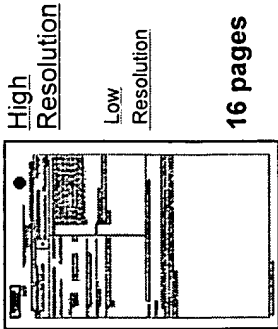
Application Number: WO1997US00009738

IPC Code: C01F 17/00; C09K 11/08; C09K 11/85;

ECLA Code: C01F17/00J2; C09K11/08C; C09K11/475C;

Priority Number: 1996-06- US1996000019368P

Abstract: Spherical particles of fluoride up-converter phosphors having a particle size of 1 micron and less can be made from their corresponding precursor hydroxycarbonate particles by heating the hydroxycarbonate particles in an oxygen-containing atmosphere to convert the hydroxycarbonate to the corresponding oxide but without changing the size and shape of the particles, and then heating the phosphor oxide particles to their corresponding fluoride particles by heating in SF6, at a temperature that will crack the SF6



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but will not change the size or shape of the phosphor particles.
[French]

⌘ Attorney, Agent
or Firm:
⌘ INPADOC
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GAYBRICK, Robert, J. ;

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⌘ Family:
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+ **METHOD FOR PREPARING SMALL PARTICLE SIZE
FLUORIDE UP-CONVERTING PHOSPHORS**

This invention relates to the preparation of fluoride up.



+ **BACKGROUND OF THE INVENTION**
+ **DETAILED DESCRIPTION OF THE INVENTION**

⌘ First Claim:

Show all claims 1. A spherical phosphor fluoride particle that
emits light in the visible wavelength range when excited by long
wavelength light that has a particle size of less than one micron. †

⌘ Forward
References:

Go to Result Set: Forward references (2)

| PDF | Patent | Pub.Date | Inventor | Assignee | Title |
|---|-----------|------------|--------------------|-----------------------------|--|
|  | US6251304 | 2001-06-26 | Wegh; Rene T. | U.S. Philips Corporation | Luminescent material |
|  | US6039894 | 2000-03-21 | Sanjurjo; Angel | SRI International | Production of substantially monodisperse phosphor particles |

⌘ Other Abstract
Info:

CHEMABS 128(07)081946Z CHEMABS 128(07)081946Z CHEMABS 130(18)244175E DERABS C1998-086540 DERABS
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